

Listing of Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

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1. (Currently Amended) A self-pointing antenna comprising:

an antenna comprising a reflector, a feed, an elongated boom arm coupled to said reflector and supporting said feed, and a pair of support struts coupled between said reflector and said boom arm; and

an actuator placed in a single location and operatively coupled with said support struts for permitting movement of said support struts for adjusting the position of said feed relative to said reflector so as to selectively adjust either/or both of the beam elevation and azimuth of a main beam axis of said antenna.
 2. (Original) The antenna of claim 1 wherein said actuator is mounted to said boom arm and comprises a two-axis actuator.
 3. (Original) The antenna of claim 2 wherein said actuator is mounted to a top side of said boom arm.
 4. (Original) The antenna of claim 2 wherein said actuator is mounted to a bottom side of said boom arm.
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5. (Original) The antenna of claim 2 wherein said actuator comprises an automotive mirror-glass actuator.

6. (Original) The antenna of claim 1 wherein each of said support struts comprises an elongated ligature and said actuator comprises a mechanism for adjusting the effective length of one or both of said ligatures.

7. (Original) The antenna of claim 6 wherein said actuator is mounted to said boom arm.

8. (Original) The antenna of claim 6 wherein said actuator is mounted to said reflector.

Q2 9. (Currently Amended) The antenna of claim 6 wherein said actuator comprises a pair of actuators mounted to said reflector and each operatively coupled to said one of said ligatures, said pair of actuators placed in a single location. fig. 7 shows 2 actuators 52, 54 placed at 2 locations.
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10. (Currently Amended) In an antenna structure, a method of self-directing a main beam axis of said antenna structure, said method comprising:

supporting a feed on an elongated boom arm coupled to said reflector;

supporting said boom arm by a pair of support struts extending between said reflector and
said boom arm; and

adjusting an effective length of one or both of said support struts by providing an actuator placed in a single location to thereby adjust the position of said feed relative to

said reflectors so as to selectively adjust either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna.

11. (Currently Amended) The method of claim 10 wherein said adjusting comprises mounting said ~~an~~ actuator to said boom arm and support struts.

12. (Original) The method of claim 11 wherein said actuator is mounted to a top side of said boom arm.

13. (Original) The method of claim 11 wherein said actuator is mounted to a bottom side of said boom arm.

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14. (Currently Amended) The method of claim 10 wherein adjusting comprises mounting a pair of actuators to said reflector, each actuator operatively coupled to said one of said support struts, said pair of actuators ^{whereat} placed in a single location ligatures.

15. (Currently Amended) A self-pointing antenna comprising:

means for supporting a feed on an elongated boom arm coupled to said reflector;

means extending between said reflector and said boom arm for supporting said boom arm; and

means for adjusting an effective length of said boom arm supporting means to thereby adjust the position of said feed relative to said reflectors so as to selectively adjust

either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna, said means for adjusting comprising an actuator placed in a single location.

16. (Original) The antenna claim 15 wherein means for adjusting comprises an actuator.

17. (Original) The antenna of claim 16 wherein said actuator is mounted to a top side of said boom arm.

18. (Original) The antenna of claim 16 wherein said actuator is mounted to a bottom side of said boom arm.

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19. (Original) The antenna of claim 16 wherein said actuator comprises an automotive mirror-glass actuator.

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20. (Currently Amended) The antenna of claim 16 wherein each of said boom arms supporting means ~~support structures~~ comprises an elongated ligature.

21. (Original) The antenna of claim 20 wherein said actuator is mounted to said boom arm.

22. (Original) The antenna of claim 20 wherein said actuator is mounted to said reflector.

23. (Currently Amended) The antenna of claim 20 wherein said ~~actuator~~ comprises a pair of actuators mounted to said reflector and each operatively coupled to said ligature ~~one of said~~ ligatures.

24. (Currently Amended) A self-pointing antenna comprising:

an antenna comprising a reflector, a feed, an elongated boom arm coupled to said reflector and supporting said feed, and a pair of support struts coupled between said reflector and said boom arm; and

an actuator placed in a single location operatively coupled with said support struts for permitting movement of said support struts and/or said boom arm for adjusting the position of said feed relative to said reflector so as to selectively adjust either/or both of the beam elevation and azimuth of a main beam axis of said antenna.

25. (Original) The antenna of claim 24 wherein said actuator connects said boom arm to said support struts and by rotation of the actuator causes the angle between the struts and boom arm to be adjusted.

26. (Original) The antenna of claim 25 wherein said actuator is mounted to said boom arm and comprises a two-axis actuator.

27. (Original) The antenna of claim 26 wherein said actuator is mounted to a top side of said boom arm.

28. (Original) The antenna of claim 27 wherein said actuator is mounted to a bottom side of said boom arm.

29. (Original) The antenna of claim 26 wherein said actuator comprises an automotive actuator.

30. (Original) The antenna of claim 24 wherein each of said support struts comprises an elongated ligature and said actuator comprises a mechanism for adjusting the effective length of one or both of said ligatures.

31. (Original) The antenna of claim 30 wherein said actuator is mounted to said boom arm.

32. (Original) The antenna of claim 30 wherein said actuator is mounted to said reflector.

33. (Currently Amended) The antenna of claim 30 wherein said actuator comprises a pair of actuators mounted to said reflector and each operatively coupled to said one of said ligatures, wherein said pair of actuators are placed in a single location.

34. (Currently Amended) A self-pointing antenna comprising:

a reflector, one of a feed and a sub-reflector, and a plurality of support struts coupled between said reflector and said one of a feed and a sub-reflector and supporting said one of a feed and a sub-reflector; and
at least one actuator placed in a single location for adjusting the position of said one of a feed and a sub-reflector relative to said reflector so as to selectively adjust either/or both of the beam elevation and azimuth of a main beam axis of said antenna.

35. (Original) The antenna of claim 34 wherein said actuator is mounted to said one of a feed and a sub-reflector and comprises a two-axis actuator.

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36. (Original) The antenna of claim 34 wherein said actuator is mounted to said one of a feed and a sub-reflector.

37. (Original) The antenna of claim 34 wherein said actuator comprises a two-axis motorized carriage.

38. (Original) The antenna of claim 36 wherein said actuator comprises a two-axis motorized carriage.

39. (Original) The antenna of claim 34 wherein said actuator comprises a pair of orthogonally acting mechanisms, each comprising a lead screw and at least one guide rail and a motor attached to said lead screw.

40. (Original) The antenna of claim 39 wherein said actuator is mounted to said one of a feed and a sub-reflector.

41. (Original) The antenna of claim 34 wherein at least two actuators are mounted to said reflector and to at least two of said support struts.

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42. (Original) The antenna of claim 34 and further including a readout device operatively coupled to said actuator to allow closed loop control of the position of said sub-reflector.

43. (Original) The antenna of claim 39 and further including a readout device operatively coupled to said actuator to allow closed loop control of the position of said sub-reflector.

44. (Currently Amended) In an antenna structure having a reflector and one of a feed and a sub-reflector, a method of self-directing a main beam axis of said antenna structure, said method comprising:

supporting a sub-reflector by a plurality of support struts extending between said reflector

and said sub-reflector; and

adjusting the position of said one of a feed and a sub-reflector relative to said reflector so as to selectively adjust either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna, wherein said adjusting comprises mounting an actuator in a single location to said one of a feed and a sub-reflector and said support struts.

45. (Cancelled)

46. (Currently Amended) The method of claim ~~44~~ 43 wherein said adjusting comprises mounting at least two actuator to said reflector and to at least two of said support struts, said at least two ~~actuators~~ placed in a single location.

47. (Currently Amended) A self-pointing antenna comprising:

a reflector and one of a feed and a sub-reflector

means for supporting said one of said feed and said a sub-reflector operatively coupled to said reflector; and

means for adjusting the position of said one of a feed and a sub-reflector relative to said reflector so as to selectively adjust either/or both of a beam elevation and beam azimuth of the main beam axis of said antenna, said adjusting means being placed in a single location on the antenna.

48. (Original) The antenna claim 47 wherein said means for adjusting comprises an actuator.

49. (Original) The antenna of claim 48 wherein said actuator is mounted to said one of a feed and a sub-reflector.

50. (Original) The antenna of claim 48 wherein said actuator comprises a two-axis motorized carriage.

51. (Original) The antenna of claim 49 wherein said actuator comprises a two-axis motorized carriage.

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cut. 52. (Original) The antenna of claim 51 wherein said actuator comprises a pair of orthogonally acting mechanisms, each comprising a lead screw and at least one guide rail and a motor attached to said lead screw.

53. (Original) The antenna of claim 52 wherein said actuator is mounted to said sub-reflector.

54. (Original) The antenna of claim 51 and further including a readout device operatively coupled to said actuator to allow closed loop control of the position of said one of a feed and a sub-reflector.

55. (Original) The antenna of claim 52 and further including a readout device operatively coupled to said actuator to allow closed loop control of the position of said one of a feed and a sub-reflector.

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56. (Currently Amended) The antenna of claim 47 wherein at least two actuators are mounted to said reflector and to at least two of said support struts, and said at least two actuators are mounted in a single location.
